

REMARKS

Favorable reconsideration of this application in light of the preceding amendments and the following remarks is respectfully requested.

Claims 1-13 having been cancelled and no claims having been added, the Applicants respectfully submit that claims 14-20 remain properly under consideration in this application.

Rejections under 35 U.S.C. § 112

Claims 14-20 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite with regard to the terms "multifunctional" and "functional." The Applicants respectfully submit that the amendments to claim 14 provided above make clear that both the core material and the shell composition of the microcapsules have at least one recited function, thereby rendering the microcapsule appropriately "multifunctional."

The Applicants respectfully submit that this amendment is sufficient to overcome this rejection and request that it be reconsidered and withdrawn accordingly.

With respect to claim 16, the Applicants respectfully submit that the amendment reflected above makes clear that the referenced polystyrene is in the polymeric matrix. The Applicants respectfully submit that this amendment is sufficient to overcome this rejection and request that it be reconsidered and withdrawn accordingly.

With respect to claims 17, 18 and 20, the Applicants respectfully submit that the amendments above reflecting dependence of these claims from claim 15 rather than claim

14 is sufficient to provide the proper antecedent bases for each of the noted claim terms.

The Applicants respectfully submit that these amendments are sufficient to overcome this rejection and request that it be reconsidered and withdrawn accordingly.

Also with respect to claims 17, 18 and 20, the Applicants respectfully submit that the noted language is simply conventional Markush group language and does therefore define ranges of polymeric components, functional additives and flame suppressors that can be incorporated in the identified portions of the microcapsules and should be interpreted accordingly. The Applicants respectfully submit that these amendments are sufficient to overcome this rejection and request that it be reconsidered and withdrawn accordingly.

Also with respect to claims 18 and 20, the Applicants respectfully submit that the noted language is drawn directly from the specification, see for example paragraphs [0002], [0017] and [0018] and represent abbreviations for these materials that would be familiar to those of ordinary skill in the art. The Applicants respectfully maintain, therefore, that these terms are sufficiently clear to comply with 35 U.S.C. § 112. The Applicants respectfully submit that these terms require no amendment and request that this rejection be reconsidered and withdrawn accordingly.

Rejections under 35 U.S.C. § 102 and/or 35 U.S.C. § 103

Claim 14 stands rejected under 35 U.S.C. § 102(b) as anticipated by JP 2000-297169 ("JP '169"). The Applicants respectfully traverse this rejection for the reasons detailed below.

The Applicants respectfully submit that JP '169 does not teach or suggest the formation of a polymeric foam matrix with incorporated microcapsules. Indeed, the Applicants suggest that the identified "core/shell" structure is simply the resin that is fed into the extruder, melted (destroying the core/shell structure), combined with a blowing agent and ejected to produce polymeric foam having a relatively homogenous matrix reflecting a mixture or copolymer of ingredients A and B. The Applicants respectfully submit that not even "the broadest reasonable interpretation" of the pending claims is anticipated by the foam described in JP '169.

Further, in light of the claims amendments reflected above, the Applicants respectfully contend that JP '169 does not teach or suggest the particular multifunctional nature of the microcapsules as now recited in claim 14.

The Applicants respectfully request that this rejection be reconsidered and withdrawn accordingly.

Claim 14 also stands rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as unpatentable over, EP 178554 ("EP '554"). The Applicants respectfully traverse these rejections for the reasons detailed below.

The Applicants respectfully submit that EP '554 does not teach or suggest the formation of microcapsules in which the shell composition incorporates one or more

additional materials for providing any of the auxiliary functions now recited in claim 14.

The Applicants further note that the microcapsules disclosed in EP '554 range in size from 0.01 mm to 0.1 mm (*i.e.*, 10 μ m to 100 μ m, with 30 μ m to 60 μ m apparently being preferred). The Applicants further maintain that no teaching or suggestion has been identified that would be sufficient to motivate one of ordinary skill to depart from the teachings and utilize microcapsules that are less than one half the minimum size taught and are less than one sixth the lower preferred size.

The Applicants respectfully request that this rejection be reconsidered and withdrawn accordingly.

Claims 14, 15 and 19 stand rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as unpatentable over, Vincent et al.'s U.S. Patent No. 4,138,356 ("Vincent"). The Applicants respectfully traverse these rejections for the reasons detailed below.

The Applicants respectfully submit that Vincent does not teach or suggest the formation of microcapsules in which the shell composition incorporates one or more additional materials for providing any of the auxiliary functions now recited in claim 14. The Applicants further note that in the microcapsules disclosed in Vincent the cross-linking agent is necessary to form the polymeric shell by reacting with the emulsifying agent.

The Applicants respectfully maintain, therefore, that the cross-linking agent is essentially a monomer that is polymerized with the emulsifying agent to form higher MW

polymeric materials and is not, therefore, a minor functional additive component that is distinct from the polymeric component.

Further, the Applicants respectfully maintain that even were the cross-linking agent considered a minor functional additive, there is no teaching or suggestion that it will provide any of the recited auxiliary functions.

The Applicants respectfully request that this rejection be reconsidered and withdrawn accordingly.

Claim 16 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Vincent. The Applicants respectfully traverse these rejections for the reasons detailed below.

As clarified in the claim amendments above, the polystyrene recited in claim 16 is in the polymeric matrix, not the microcapsule wall, making the cited portion of Vincent's specification irrelevant to this aspect of the pending claims. The Applicants again also respectfully submit that Vincent does not teach or suggest the formation of microcapsules in which the shell composition incorporates one or more additional materials for providing any of the auxiliary functions now recited in claim 14, and as a result of its dependence, claim 16, and incorporate the other distinctions between the claimed invention and Vincent as detailed above.

The Applicants respectfully request that this rejection be reconsidered and withdrawn accordingly.

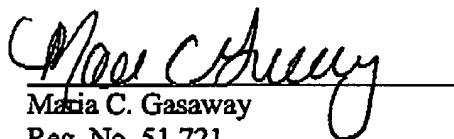
CONCLUSION

In view of the above remarks and amendments, the Applicants respectfully submit that each of the pending objections and rejections have been addressed and overcome, leaving the present application in condition for allowance. A notice to that effect is respectfully requested.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to credit overpayment, or charge any missing payment or deficiency for fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly including extension of time fees, to Deposit Account No. 50-0568.

Respectfully submitted,



Maria C. Gasaway
Reg. No. 51,721

Date 7/22/05

2790 Columbus Road,
Building 11
Granville, OH 43023
(740) 321-7213